

SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION

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TO: Commissioners and Alternates
FROM: Zack Wasserman, Chair (415/352-3600; info@bcdc.ca.gov)
SUBJECT: **Commissioner Working Group Report and Recommendation**
(For Commission consideration on October 2, 2014)

Section 1: Formation

On February 7, 2013, Chair Wasserman announced that BCDC would create an informal Commissioner Working Group (CWG) to strengthen the Commission's expertise on the issue of Rising Sea Level (RSL), provide policy recommendations for future RSL Commission actions, and to help formulate a regional resilient shorelines strategy with other members of the Joint Policy Committee (JPC). The Bay's water level will rise three feet or more between 2050 and 2100 even if greenhouse gas emissions are completely eliminated. The Bay Area must determine how to adapt its built environment to that challenge. The CWG would ask a variety of stakeholders the following three questions:

1. "What can we do?";
2. "What should we do – given reasonable priorities and unforeseen consequences?"; and,
3. "How do we fund it?"

Commissioners Gibbs, Gioia, McElhinney, Pemberton, Pine, Scharff, Sears, and Zwissler volunteered to participate on the CWG. The CWG met monthly, usually for up to two hours prior to a Commission meeting, over an 18-month period. Its members participated in a series of discussions with community, public sector, private sector, and nonprofit leaders invited to educate the Commissioners and attending staff about their RSL-related work, expertise, and concerns. The Commissioners have developed a series of recommendations and a list of questions that require further study that are found in Section 3 of this report.

Section 2: Summary of Key Issues Explored

Communication. Developing a Bay Area-wide resilient shorelines strategy will require Commissioners, public officials, and local agency staffs to learn how to encourage the public to prepare for a rising Bay. This task requires both "worrying" the listener and providing him or her with "hope" that adaptation can be accomplished successfully. Perhaps the most innovative approach to education discussed by a participant is the Hayward Recreation District's "Sharks in My Backyard" program that visualizes 55" of RSL in Hayward. The Bay Area's most successful risk and vulnerability communication program appears to be BCDC's Adapting to Rising Tides (ART) program; however, it is not designed to be a general public education program.

Private Sector. Hurricane Sandy encouraged some private sector concerns to plan for a parallel type of storm in the Bay Area and address possible impacts in ways that they had not considered. In both formal and informal discussions, CWG members have learned that some businesses are starting to prepare for RSL (e.g., Pacific Gas and Electric Company and Kaiser). However, the



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CWG questions whether most companies of any size are engaged in formal substantive adaptation planning. It is not clear that even the focused adaptation planning efforts driven by the Bay Area Council (BAC), the Silicon Valley Leadership Group (SVLG), or the Bay Planning Coalition (BPC) are reaching critical mass. It does not appear that many for-profit concerns are communicating with each other about common RSL issues. In addition, there seems to be only minimal awareness of the potential impacts of RSL on critical transportation and utility infrastructure in the Bay Area.

CWG members are concerned that private sector planning for RSL in the Bay Area may be limited because private sector institutions may focus more resources on short-term results as opposed to RSL's longer-term requirements. PG&E's representative at the CWG meeting in July 2013 used the phrase "slow moving emergency" while describing his firm's RSL planning efforts. On the other hand, one participant described the necessary planning as a "time sink" (as opposed to a profit center). Public sector planning efforts will be more successful if more and varied private sector interests participate in them or if companies independently develop resilience strategies that are aligned with a Bay Area regional resilience strategy.

Public Infrastructure Agencies. BCDC's ART program was characterized by the invited public sector agencies, and by others, as the most successful vehicle through which public sector interests have coordinated and collaborated their RSL planning in the East Bay. This is especially true as public agencies protect "networked infrastructure," i.e., infrastructure owned by one agency that is connected to that of another. Six issues around the Bay spur continued interest among CWG members:

1. The need to focus on the vulnerability of commuter rail transportation, including assets located in downtown San Francisco because approximately two-thirds of all BART trips begin or end in the City's Market Street corridor;
2. Capitol Corridor's "hotspot analysis" that 70 miles of Union Pacific's (U.P.) 170 miles of track in the Bay Area will be affected by RSL, which Capitol Corridor wants to address in collaboration with U.P.;
3. How Caltrans' centralized RSL policies are implemented locally;
4. East Bay Municipal Utility District's concerns about the integrity of the approximately 1,500 miles of city feeder pipes that connect to its system;
5. SFO's work with the U.S. Coast Guard and San Mateo County (perhaps the "hottest" RSL "hotspot" of the Bay) to ensure reliable access to the region's largest airport; and,
6. The integrity of the Port of Oakland's airport levees, along with how to ensure that the seaport's "back-end" infrastructure is protected.

Finance, Valuation, and Risk. Five separate CWG meetings concentrated on how various parts of the financial services industries (insurance, reinsurance, and investments) are developing RSL strategies. Issues raised by the CWG revolve around the following questions, none of which have been resolved to the CWG's satisfaction:

1. How insurance companies and financial institutions analyze, measure, and account for climate risk in the short- or long-term;
2. Whether and/or how financial institutions promote continued growth in vulnerable areas and, if so, how such companies protect their shareholders from investment-associated risk;
3. Whether and/or how BCDC and other interested public sector agencies without specific regulatory authority can best collaborate with private sector interests to promote long-term appropriate land use policies; and,

4. How best to value various types of infrastructure and asset protection (e.g., rip-rap, wetlands, and horizontal levees), and to fund their construction?

Equity Concerns. BCDC staff has started to work with the Kresge Foundation and the San Francisco Foundation in a nascent effort to collaborate with representatives of underserved communities located next to the Bay. CWG members agree that no regional shoreline resilience strategy can be successful unless it ensures that the most vulnerable Bay Area communities are not made more vulnerable through the strategy's implementation and, instead, makes the entire Bay Area more resilient in a fair and just manner.

Bay Fill Policies. The CWG both initially reviewed the Commission's 2011 Bay Plan amendments relating to climate change, and then discussed with BCDC staff how those policies are being applied to permit applications. CWG and staff agreed that staff should provide both general and specific guidance and education for applicants as BCDC's learning evolves. This is especially true with regard to how BCDC interprets its Bay fill policies regarding RSL vulnerability and risk in the context of a Bay that is getting larger due to RSL rather than shrinking due to fill.

Section 3: Proposed CWG Action Plan

Since 2008, when the Governor signed AB 2094, BCDC has demonstrated creativity and resolve to fulfill its mandate as the State agency responsible for leading the development of Bay Area preparedness for and adaptation to rising sea level, storm surge, and inundation. Since BCDC published its RSL inundation maps in April 2009, the Commission has executed a broad approach to climate change adaptation work. Staff has worked with local, regional, state, and federal partners to develop science, planning, and governance expertise. The ART program has developed a groundbreaking community-based adaptation planning process that has just begun in the Bay Area. These efforts have enabled BCDC to become experts in the field of climate change adaptation.

As a State agency, BCDC is collaborating with the Coastal Commission, Coastal Conservancy, State Lands Commission, and Ocean Protection Council to develop a plan that describes how the State can achieve success in adaptation planning, to present a statewide framework to reduce climate risks and protect what Californians value about our shorelines, and to identify changes to existing laws, policies, and funding streams to implement that plan. The plan will build off existing statewide RSL policies and guidance and BCDC's climate change policies.

Shoreline Resilience Program. BCDC must take further steps to bolster and focus its scarce resources to lead the development of a regional shoreline resilience strategy. As noted in the State's Little Hoover Commission report, regional entities – not the State – are developing adaptation plans. While BCDC has obtained grants and leveraged partnerships, available resources are extremely limited compared to the scope and complexity of the task. BCDC needs to advocate for more resources, become even more strategic in its policy approach, and fill the leadership vacuum in the Bay Area by:

1. Focusing more resources on its current collaboration with the Association of Bay Area Governments (ABAG) and the State Coastal Conservancy to develop a shoreline resilience strategy (based, in part, on an inventory of shoreline flood control management capacity) as part of the JPC's climate change agenda;

2. Expanding the ART Program by partnering with local governments and other organizations willing to expend their own resources to implement ART in as many Bay Area communities as possible, and by implementing a training program that includes the ART Portfolio, “Help Desk,” and Climate Corps Fellows to disseminate lessons learned;
3. Analyzing new initiatives such as those being launched in San Mateo County, San Francisco and Benicia, to determine whether and how their results can be integrated with BCDC initiatives; and,
4. Collaborating within the Administration, working with the Legislature, and partnering with other potential funders to obtain the additional resources necessary to prepare a regional resilience strategy.

Climate Readiness Institute (CRI). BCDC should promote the development of the CRI, which is a coalition of U.C. Berkeley, U.C. Davis, Stanford University, and the Lawrence Berkeley Laboratory. CRI has the potential to complement and supplement BCDC activities by working with BCDC and other practitioners to fill the knowledge gaps that now exist regarding RSL and its ramifications. BCDC should advocate that CRI, among other tasks:

1. Help develop a new “Bay Model 2.0” within the next three years to determine how changes to the Bay’s bathymetry and topography could affect habitat and shoreline resilience, among other results, which would offer local and regional planners substantial information to develop a successful regional shoreline resilience strategy;
2. Determine within the next six months (based on the JPC’s recent survey) which current adaptation projects are most readily measurable, scalable, and adaptable to other parts of the Bay Area, and to advocate for their expansion;
3. Evaluate creative funding mechanisms and options for adaptation projects; and,
4. Develop a cadre of professionals, trained as graduate students, to help BCDC and its partners implement collaborative solutions to RSL based upon lessons learned from adaptation projects around the Bay.

2017 Sustainable Communities Strategy. In collaboration with the Metropolitan Transportation Commission and ABAG, BCDC should voluntarily integrate the knowledge gained through its ART and Shoreline Resilience programs, and its CRI collaboration, into the 2017 Sustainable Communities Strategy, as appropriate.

BCDC Permit Application. BCDC’s current application requires applicants to provide limited information that can help BCDC better gauge the possible ramifications of RSL on individual proposed projects. By applying the climate change policies, BCDC, its collaborators, and others have learned that developing and using more and different types of information would provide the Commission with increased clarity about how both individual projects and the communities that surround them would withstand RSL in combination with tides and storms. Therefore, BCDC should amend its Permit Application by the end of 2015 to require applicants that are required to prepare a risk assessment for their project(s) to perform a “total water level” vulnerability analysis that includes a variety of tidal actions, storm surges, and rising sea level on each project, as opposed to a more static analysis that concentrates on RSL alone. This change would make project analyses more robust and enable Commissioners to better understand the long-term affects of RSL and other natural events on individual projects and their surroundings.

Commissioner Working Group on Bay Fill. BCDC should create a Commissioner Working Group on Bay Fill to determine whether and how to amend current BCDC Bay fill laws and policies in light of the need to adapt to RSL. The new CWG would report back to the Commission with its preliminary recommendations by December 2015. The CWG would be asked to

recommend changes to the Commission's current laws and policies to make the Bay more resilient and productive environmentally and economically while ensuring Bay protection and maximum feasible public access to the Bay. The new CWG would include representatives from the U.S. Army Corps of Engineers and the federal EPA, as each has a major role to play in permitting fill. In addition, the new CWG would request assistance from a wide variety of stakeholders, including representatives from the scientific, environmental, economic, and equity communities. Discussions and decisions surrounding the Bay fill policies should reflect the same spirit of collaboration and cooperation that supported SB 1184, the Commission's legislation introduced in 2013 to expand the ART program and prepare a regional RSL strategy in concert with the JPC, local governments, and other interested parties.

Commissioner Working Group on Rising Sea Level. CWG should continue its work on the following tasks, and report to the Commission semi-annually:

1. Oversee and promote the development of the Resilient Shorelines Program and regional strategy by providing guidance to BCDC staff through regularly scheduled discussions on policy issues, including strategy options, implementation, and financing;
2. Monitor, coordinate, and promote Joint Policy Committee projects relevant to RSL, including the Housing and Community Resilience Project now underway that takes into account the placement of Priority Development Areas;
3. Coordinate its work on RSL with that of the new Working Group on Bay Fill.
4. Continue to seek answers to the above open questions and promote collaboration among public, private, and nonprofit interests;
5. Review and recommend proposed changes to BCDC's laws and policies regarding RSL and shoreline resilience prior to full Commission review (e.g., changes to the Permit Application); and,
6. Determine how best to communicate, educate, and advocate on issues relating to climate change adaptation, concentrating on:
 - a. Explaining and promoting BCDC's role in developing Bay Area shoreline resilience;
 - b. Garnering necessary resources to create and implement RSL programs and projects;
 - c. Encouraging far more private sector long-term adaptation planning to ensure a continuing very high quality of life in the Bay Area;
 - d. Fostering meaningful communication among the public, nonprofit, and private sectors;
 - e. Advocating on behalf of underserved communities by addressing social equity issues so that any Bay Area shoreline resilience strategy improves the long-term quality of life in such communities;
 - f. Promoting the integration of nature-based solutions in Bay Area resilience planning; and,
 - g. Staff briefings for and discussions with planners in each county prior to the end of Q1 2015 that share the lessons of ART, describe the JPC Shoreline Resilience Program, and discuss the future of local and regional adaptation strategies.